

Claims

- [c1] 1. An apparatus for detecting and decoding music formats for mobile phones, comprising:
 - a receiver, for receiving a digital music file; and
 - a data processing unit, for detecting a format of said digital music file and decoding said digital music file responsive to the detected format of said digital music file.
- [c2] 2. The apparatus for detecting and decoding music formats for mobile phones of claim 1, wherein said data processing unit further comprises
 - a central processing unit, for receiving said digital music file from said receiver; and
 - a music IC, for detecting the format of said digital music file and decoding said digital music file via a firmware.
- [c3] 3. The apparatus for detecting and decoding music formats for mobile phones of claim 2, wherein said data processing unit further comprises
 - a data buffer, coupled to said central processing unit and said music IC, said data buffer receiving and temporarily storing said digital music file and transmitting said temporarily stored digital music file to said music IC.

- [c4] 4. The apparatus for detecting and decoding music formats for mobile phones of claim 1, wherein said digital musical file is a MIDI file.
- [c5] 5. The apparatus for detecting and decoding music formats for mobile phones of claim 1, wherein the format of said digital musical file is selected from a group of formats consisting of MIDI, SP-MIDI, SMAF, MFi, RTTTL, and I-Melody.
- [c6] 6. The apparatus for detecting and decoding music formats for mobile phones of claim 1, wherein said data processing unit further comprises;
 - a central processing unit, for receiving said digital music file from said receiver and detecting the format of said digital music file; and
 - a music IC, for selecting a decoding procedure corresponding to the detected format of said digital music format by central processing unit to decode said digital music file.
- [c7] 7. The apparatus for detecting and decoding music formats for mobile phones of claim 6, wherein said data processing unit further comprises
 - a data buffer, coupled to said central processing unit and said music IC, said data buffer receiving and temporarily storing said digital music file and transmitting said tem-

porarily stored digital music file to said music IC.

- [c8] 8. A method of sharing digital music for mobile phones, comprising:
 - providing a digital music file; and
 - transmitting said digital music file to a mobile phone, wherein said mobile phone detects a format of said digital music file and decodes said digital music file.

- [c9] 9. A method of sharing digital music for mobile phones, wherein the step of detecting the format of said digital music file and decoding said digital music file by the mobile phone further comprises:
 - obtaining a header of said digital music file, said header having an ID;
 - determining a format of said digital music file responsive to said ID;
 - obtaining a decoding procedure corresponding to the detected format of said digital music file; and
 - performing said decoding procedure to decode said digital music file.